



US005102379A

United States Patent [19]

Pagluica et al.

[11] Patent Number: **5,102,379**[45] Date of Patent: **Apr. 7, 1992**[54] **JOURNAL BEARING ARRANGEMENT**[75] Inventors: **Gino Pagluica, Manchester;**
Cornelius V. Sundt, Windsor, both of
Conn.[73] Assignee: **United Technologies Corporation,**
Hartford, Conn.[21] Appl. No.: **674,267**[22] Filed: **Mar. 25, 1991**[51] Int. Cl.⁵ **F16H 57/08**[52] U.S. Cl. **475/331; 475/159**[58] Field of Search **475/159, 317, 331, 348**[56] **References Cited****U.S. PATENT DOCUMENTS**

1,678,798	7/1928	Asprooth	475/348
2,154,532	4/1939	Ryder	74/305
3,293,948	12/1966	Jarchow et al.	475/348 X
3,315,546	4/1967	Fritsch	475/348 X
3,964,334	6/1976	Hicks	74/410
4,719,918	1/1988	McCreary	475/331 X

4,892,011 1/1990 Nishida et al. 475/159 X

FOREIGN PATENT DOCUMENTS58-196368 11/1983 Japan 475/159
62-288747 12/1987 Japan 475/348*Primary Examiner—Dwight Diehl**Attorney, Agent, or Firm—Edward L. Kochey, Jr.*[57] **ABSTRACT**

A planetary gear system includes a plurality of planet gears, each having a journal bearing and a pin, end supported in a planet carrier. Each pin has a small diameter central portion axially extending for end support. A larger diameter outer portion is integral with the central portion at an inboard merged zone, and has cantilever sections extending outboard from the merged zone. Each pin is sized such that bending of the merged zone in one direction is countered by bending of the cantilever sections in the other direction to achieve a substantially linear bearing surface under load.

10 Claims, 3 Drawing Sheets